

August 23, 2021

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U.S. Environmental Protection Agency  
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Associate Director  
Air, Toxics, and Inspections Coordination Branch (6 EN-A)  
U.S. EPA, Region 6  
1201 Elm Street, Suite 500  
Dallas, Texas 75270

**RE: Consent Decree, United States vs. Exxon Mobil Corp., Civil Action No. 4:17-cv-3302 (S.D. Tex.), Semi-Annual Reporting Requirements - ExxonMobil Baytown Olefins Plant**

**To Whom It May Concern:**

Pursuant to Section IX, Paragraphs 66-73 of above referenced Consent Decree, Exxon Mobil Corporation (ExxonMobil) submits this Semi-Annual Report (SAR) covering the period of January 1, 2021 through June 30, 2021.

Certification Statement  
Per Consent Decree Paragraph 71:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

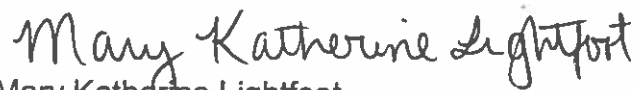
This is the **Non-Confidential Version** of this Report. Individual pages containing **Confidential Business Information**, protected under 40 CFR Part 2, are conspicuously marked as **Confidential Business Information** and redacted from this **Non-Confidential Version**. The Confidential version of this Plan is being submitted under a separate cover.

If you have any questions about this SAR or require any additional information, please contact Kelly E. Davis at 346-259-6014 or [kelly.e.davis@exxonmobil.com](mailto:kelly.e.davis@exxonmobil.com).

August 23, 2021

Page 2 of 3

Sincerely,

A handwritten signature in black ink that reads "Mary Katherine Lightfoot". The signature is written in a cursive, flowing style.

Mary Katherine Lightfoot

BOP Plant Manager

ExxonMobil Baytown Olefins Plant

Attachment

cc: EES Case Management Unit  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611  
**Re: DJ # 90-5-2-1-10128 and 10128/1**

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## **Baytown Olefins Plant**

**Baytown, Texas**

**SEMI-ANNUAL REPORT  
PURSUANT TO CONSENT DECREE,  
*UNITED STATES, ET AL V. EXXON MOBIL CORPORATION  
AND EXXONMOBIL OIL CORPORATION,*  
CIVIL ACTION NO. 4:17-cv-3302 (S.D. TX)**

### **Non-Confidential (Redacted) Version**

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**January 1, 2021 – June 30, 2021**

**3525 Decker Drive**

**Baytown, Texas**

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Attachment A – Fenceline Monitoring Data

Attachment B – Subsequently Updated WGMP Tables (**Confidential Business Information – Redacted**)

Attachment C – Subsequently Updated WGMP Flare Mapping Schematics  
(**Confidential Business Information – Redacted**)

Attachment D – Summary of ExxonMobil Baytown Olefins Plant Information Related  
to Winter Storm Uri Force Majeure Notification

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## SECTION 1 STATUS OF CONSENT DECREE SECTION V COMPLIANCE REQUIREMENTS

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This progress report provides the status of implementation of Consent Decree requirements that, during the reporting period, require the ExxonMobil Baytown Olefins Plant to undertake a specific action or make a submittal to an agency; or otherwise require the ExxonMobil Baytown Olefins Plant to take specific steps to implement new obligations, including new control or emissions requirements, new monitoring requirements, or institution of new procedures. Once the ExxonMobil Baytown Olefins Plant has reported a requirement as implemented, it will not appear in subsequent progress reports under this subparagraph.

Consent Decree Paragraph 66a. – b.

a. A description of the status of work performed and progress made toward implementing all requirements of Consent Decree Section V (Compliance Requirements) at the Covered Facilities. This topic should describe any major milestones completed and remaining to be completed;

**ExxonMobil Baytown Olefins Plant does not have any remaining work required to meet the Consent Decree Section V Compliance Requirements, as noted by “None” in Table 1.1.**

**TABLE 1.1 Major Milestones Completed For This Reporting Period**

<b>Applicability</b>	<b>Description of Work Completed During This Reporting Period</b>	<b>Completion Date</b>
None	None	None

**ExxonMobil Baytown Olefins Plant does not have any remaining work required to meet the Consent Decree Section V Compliance Requirements, as noted by “None” in Table 1.2.**

**TABLE 1.2 Status of Remaining Work to be Completed**

<b>Applicability</b>	<b>Remaining Work To Be Completed</b>	<b>Anticipated Completion Date</b>
None	None	None

b. A description of any problems encountered or anticipated in meeting the requirements in Consent Decree Section V (Compliance Requirements) at the Covered Facilities, together with implemented or proposed solutions;

**ExxonMobil Baytown Olefins Plant has not encountered nor anticipates problems in meeting the requirements of Consent Decree Section V Compliance Requirements as indicated by “None” in Table 1.3.**

**TABLE 1.3 Encountered or Anticipated Problems In Work To be Completed**

<b>Covered Flare</b>	<b>Encountered or Anticipated Problem(s)</b>	<b>Proposed or Implemented Solution(s)</b>
None	None	None

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## SECTION 2 STATUS OF CONSENT DECREE SECTION V REPORTING REQUIREMENTS

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Below is a summary of the status of reports as required under Consent Decree Section V.

### Flare Data and Monitoring Systems and Protocol Report

Requirement: CD Paragraph 18

Description: For each Covered Flare, by no later than 365 Days after the Effective Date, the Defendants must submit a report, consistent with the requirements in Appendix 1.5, to EPA that includes the following:

- a. The information, diagrams, and drawings specified in Paragraphs 1–7 of Appendix 1.5;
- b. A detailed description of each instrument and piece of monitoring equipment, including the specific model and manufacturer, that the Defendants have installed or will install in compliance with Paragraphs 20–24 of this Consent Decree (Paragraphs 8–9 of Appendix 1.5); and
- c. A narrative description of the monitoring methods and calculations that the Defendants will use to comply with the requirements of Paragraph 43 (Paragraph 10 of Appendix 1.5).

**Status: The Flare Data and Monitoring Systems and Protocol Report was submitted on June 6, 2019.**

### Initial Waste Gas Minimization Plan (“Initial WGMP”)

Requirement: CD Paragraph 29

Description: By no later than 365 Days after the Effective Date, for each Covered Flare, the Defendants must submit to EPA an Initial Waste Gas Minimization Plan that discusses and evaluates flaring Prevention Measures on both a facility-wide and Covered Flare-specific basis for each Covered Facility.

**Status: The Initial Waste Gas Minimization Plan was submitted on June 6, 2019.**

### First Updated Waste Gas Minimization Plan (“First Updated WGMP”)

Requirement: CD Paragraph 30

Description: By no later than 730 Days after the Effective Date, the Defendants must submit to EPA a First Updated WGMP that updates, if and as necessary, the information, diagrams, and drawings required in the Flare Data and Monitoring Systems and Protocol Report required by Paragraph 18 and the information required in sub-Paragraphs 29.a–29.e for the 12-month period after the period covered by the Initial Waste Gas Minimization Plan.

**Status: The First Updated Waste Gas Minimization Plan was submitted on June 5, 2020.**



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## SECTION 3 STATUS OF PERMITTING ACTIVITY

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Consent Decree Paragraph 66c.

c. A description of the status of any permit applications, including a summary of all permitting activity, pertaining to compliance with this Consent Decree;

**Status:** ExxonMobil Baytown Olefins Plant submitted a permit application to TCEQ's Air Permits Division for Permit 3452/PSD-TX-302M2/PAL6 on May 17, 2019. The altered permit was issued September 16, 2019, and incorporated the requirements listed in the Consent Decree sub-Paragraph 60.c such that the requirements (i) become and remain "applicable requirements" as that term is defined in 40 C.F.R. §70.2 and (ii) survive the termination of the Consent Decree.

ExxonMobil Baytown Olefins Plant submitted a permit application to TCEQ's Air Permits Division for Title V Permit O1553 on January 27, 2020 to incorporate the requirements listed in the Consent Decree sub-Paragraph 60.c into Title V Permit O1553 through incorporation of Permit 3452/PSD-TX-302M2/PAL6 issued September 16, 2019. In accordance with Consent Decree sub-Paragraph 60.b., the permit application was submitted no later than three years after the Effective Date or one year after the respective deadline for the Compliance Requirements listed in sub-Paragraph 60.c.

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## SECTION 4 REPORTS SUBMITTED TO LDEQ

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Consent Decree Paragraph 66d.

- d. A copy of any reports that were submitted only to LDEQ and that pertain to compliance with this Consent Decree.

**Status: This section does not apply because the ExxonMobil Baytown Olefins Plant is located in the State of Texas and therefore does not submit reports to LDEQ.**

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## SECTION 5 STATUS OF SEP(S)

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Consent Decree Paragraph 66e.

e. A description of the Defendants' progress in satisfying its obligations in connection with the SEP(s) under Section VI including, at a minimum, a narrative description of activities undertaken; status of any construction or compliance measures, including the completion of any milestones set forth in the SEP Work Plan (attached as Appendix 2.1), and a summary of costs incurred since the previous report;

**Status: The Louisiana Beneficial Environmental Projects (BEPs) have been completed. Refer to the 2H2019 Semi-Annual Report submitted by the ExxonMobil Baton Rouge Chemical Plant on February 26, 2020 for supporting information and documentation.**

**The Baytown Area Phyto-Pollution Reduction Supplemental Environmental Project (SEP) has been completed. Refer to the 2H2020 Semi-Annual Report submitted by the ExxonMobil Baytown Chemical Plant on February 25, 2021.**

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## SECTION 6 UPDATED WASTE GAS MINIMIZATION PLAN (WGMP)

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Consent Decree Paragraph 66f.

f. Any updated WGMP for the Covered Facilities that is required to be submitted by Paragraph 31.

### Subsequent Updates to WGMPs (“Subsequently Updated WGMP”)

Requirement: CD Paragraph 31

On an annual basis after submitting the First Updated WGMP until termination of the Decree, the Defendants must submit an updated WGMP for a Covered Facility as part of the Semi-Annual Report required by Section IX (Reporting Requirements) if, at that Covered Facility, the Defendants: a) commence operation of a Newly Installed Covered Flare or permanently remove a Covered Flare from service, b) connect a new Waste Gas stream to a Covered Flare, c) intentionally modify the Baseload Waste Gas Flow Rate to a Covered Flare, d) install additional FGRS, or e) change the design of a Covered Flare. Each update must update, if and as necessary, the information required in sub-Paragraphs 29.a.i - 29.a.iii. Each update must update, if and as necessary, the information required in sub-Paragraphs 30.a and 30.b. To the extent the Defendants propose to extend any schedule set forth in a previous WGMP for any of the Covered Facilities, the Defendants may do so only with good cause, the determination of which is subject to Section XII (Dispute Resolution).

**Status: The Initial Waste Gas Minimization Plan was submitted on June 6, 2019. The first Updated Waste Gas Minimization Plan was submitted on June 5, 2020. Subsequent updates, if necessary, will be made on an annual basis as part of the Semi-Annual Report.**

**As part of this semi-annual reporting period, ExxonMobil Baytown Olefins Plant is providing updates to the waste gas mapping tables of the First Updated WGMP, presented in Attachment B. Updated Flare Mapping Schematics from the Initial WGMP showing the changes provided in Attachment B are presented in Attachment C.**

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## SECTION 7 SUMMARY OF INTERNAL FLARING INCIDENT REPORTS

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Consent Decree Paragraph 66g.

- g. Any summary of internal flaring incident reports as required by Paragraph 34.

### Submitting Summary of Internal Flaring Incident Reports

Requirement: CD Paragraph 34b.

In each Semi-Annual Report due under Section IX (Reporting Requirements), the Defendants must include a summary of the following items for each Reportable Flaring Incident that occurred during the six-month period that the Semi-Annual Report covers:

- i. Date;
- ii. Duration;
- iii. Amount of VOCs and HAPs emitted;
- iv. Root cause(s);
- v. Corrective action(s) completed;
- vi. Corrective action(s) still outstanding; and
- vii. An analysis of any trends identified by the Defendants in the number of Reportable Flaring Incidents, the root causes, or the types of corrective action(s).

**Status: In accordance with Paragraph 34a. of the Consent Decree, ExxonMobil Baytown Olefins Plant began monitoring for Reportable Flaring Incidents (RFIs) on June 6, 2019. A summary of RFIs that occurred from January 1, 2021 through June 30, 2021 are provided in Table 7.1.**

**TABLE 7.1 January 1 – June 30, 2021 Summary of Internal Flaring Incident Reports**

<b>Date</b>	<b>Duration, <i>Hours</i></b>	<b>Amount Emitted</b>	
		<b>VOCs, <i>lbs</i></b>	<b>HAPs, <i>lbs</i></b>
1/8/2021 06:15 – 1/10/2021 09:33	51.3	10,891	1,004
<b>Covered Flare(s)</b>	Primary Flare, BOP-X Flare		
<b>Root Cause</b>	Failed governor valve actuator on BOP-X Recycle Ethane Compressor (XMC04).		
<b>Corrective Action(s) Completed</b>	The governor valve actuator was replaced. Updated XMC04 trip response guidance.		
<b>Corrective Action(s) Still Outstanding</b>	None		

<b>Date</b>	<b>Duration, <i>Hours</i></b>	<b>Amount Emitted</b>	
		<b>VOCs, <i>lbs</i></b>	<b>HAPs, <i>lbs</i></b>
1/29/2021 09:56 – 1/30/2021 14:50	28.9	192	28
<b>Covered Flare(s)</b>	BOP-X Flare		
<b>Root Cause</b>	Planned BOP-X plant flare test designed to optimize flare performance. Test plan and associated procedures were followed to minimize emissions associated with the test, including conducting the test when no other base BOP flaring was occurring.		
<b>Corrective Action(s) Completed</b>	None – planned activity		
<b>Corrective Action(s) Still Outstanding</b>	None – planned activity		

Date	Duration, Hours	Amount Emitted	
		VOCs, lbs	HAPs, lbs
2/14/2021 22:13 – 3/19/2021 15:18	785.1	93,800	8,378
<b>Covered Flare(s)</b>	Primary Flare, Secondary Flare, BOP-X Flare		
<b>Root Cause</b>	<p>Due to impacts from severe inclement weather associated with Winter Storm Uri, the site experienced a loss of on-site and third-party utilities resulting in unit shutdowns, recovery, and subsequent startups with associated flaring.</p> <p>As soon as sufficient on-site and third-party utility supplies were available and restored, procedures were followed and subsequent startup was expeditiously completed in a safe manner.</p> <p>As the storm's impacts were beyond the control of BOP, despite best efforts, including the associated shutdown, recovery and subsequent startup, impacts from Winter Storm Uri constitute a Force Majeure (FM) event as set forth in a letter to the EPA dated 3/1/2021.</p>		
<b>Corrective Action(s) Completed</b>	None – Force Majeure event		
<b>Corrective Action(s) Still Outstanding</b>	None		

Date	Duration, Hours	Amount Emitted	
		VOCs, lbs	HAPs, lbs
4/1/2021 15:07 – 4/2/2021 13:14	22.1	284	23
<b>Covered Flare(s)</b>	Primary Flare, Secondary Flare, BOP-X Flare		
<b>Root Cause</b>	<p>Flow transmitter MF-106 failed, causing control valve MR-053 to automatically open to 100%, as designed. This resulted in downstream equipment venting to the flare header.</p> <p>Additionally, the bypass used around Arsine Scrubber AR-01 resulted in Deethanizer Tower TT-02 backpressure to the flare header.</p>		
<b>Corrective Action(s) Completed</b>	<p>Replaced flow transmitter MF-106</p> <p>Added highlighted drawing to applicable procedure</p>		
<b>Corrective Action(s) Still Outstanding</b>	None		



Date	Duration, Hours	Amount Emitted	
		VOCs, lbs	HAPs, lbs
5/19/2021 23:47 – 5/21/2021 03:23	27.6	16,047	984
<b>Covered Flare(s)</b>	Primary Flare, Secondary Flare, BOP-X Flare		
<b>Root Cause</b>	A ground fault occurred in the Substation 8 disconnect switch which was supplying power to the Ethylene Refrigeration Compressor motor (XVCM02) at BOP-X. Backup power was not provided through the automatic transfer system in Substation 7 as designed due to a failed fiber optic interface. This resulted in the loss of XVCM02, cold box warming, triggering of process safety systems on BOP-X, and safe utilization of the flare system (BOP-X, Primary, and Secondary Flares).		
<b>Corrective Action(s) Completed</b>	Replaced Substation 7 fiber optic interface Replaced Substation 8 switch link		
<b>Corrective Action(s) Still Outstanding</b>	None		

Date	Duration, Hours	Amount Emitted	
		VOCs, lbs	HAPs, lbs
6/23/2021 13:46 – 6/24/2021 17:37	15.3	278	63
<b>Covered Flare(s)</b>	Primary Flare, Secondary Flare, BOP-X Flare		
<b>Root Cause</b>	<p>A pressure instrument malfunction as well as a valve malfunction decreased FGR availability during FGR swap from C Boiler to D Boiler, resulting in an RFI.</p> <p>Additionally, a ground fault on Substation 1 and loss of power to switchgear L52B/5 resulted in cycling power to the Hydrogen Compressors (MC-03's) Hardy Vibration System. Upon powering back up, the MC-03's Hardy Vibration System output a latching trip signal, which led to the shutdown of all three MC-03 compressors.</p>		
<b>Corrective Action(s) Completed</b>	Pressure instrument and valve malfunctions resolved Isolated grounds on Substation 1 control system		

<b>Corrective Action(s) Still Outstanding</b>	Check latching function of MC03 Hardy Vibration system and make adjustments as necessary
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<b>Date</b>	<b>Duration, Hours</b>	<b>Amount Emitted</b>	
		<b>VOCs, lbs</b>	<b>HAPs, lbs</b>
6/25/2021 17:22 – 7/4/2021 16:40	108.5	14,339	1,860
<b>Covered Flare(s)</b>	Primary Flare, BOP-X Flare, Secondary Flare		
<b>Root Cause</b>	BOP-X Ethylene Refrigeration Compressor motor (XVCM02) ground faulted.		
<b>Corrective Action(s) Completed</b>	XVCM02 was replaced		
<b>Corrective Action(s) Still Outstanding</b>	None		

Paragraph 34.b.vii. of the Consent Decree requires an analysis of any trends identified in the number of Reportable Flaring Incidents, the root causes, or the types of corrective actions(s).

**Status: ExxonMobil Baytown Olefins Plant did not identify trends in the number of RFIs, the root causes, or the types of corrective action(s).**

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## SECTION 8 REPORTING SUMMARY

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Consent Decree Paragraph 66h.

- h. A summary of the following, per Covered Flare per Calendar Quarter (hours shall be rounded to the nearest tenth):
- (1) The total number of hours of Instrument Downtime claimed pursuant to Paragraph 45, expressed as both an absolute number and a percentage of time the Covered Flare that the instrument/equipment monitors is In Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas;

**TABLE 8.1 1st Quarter 2021 Instrument Downtime Summary**

<b>Covered Flare</b>	<b>Monitoring System</b>	<b>System Downtime (%)</b>	<b>System Downtime (hours)</b>
Primary Flare	Waste Gas Flow (ZD02)	0.1	2.0
Primary Flare	Waste Gas Flow (BD)	0.7	15.5
Primary Flare	Purge Gas Flow	0.0	0.0
Primary Flare	Supplemental Gas Flow	0.1	1.3
Primary Flare	Steam Flow	0.5	11.5
Primary Flare	Net Heating Value (ZD02)	0.0	0.0
Primary Flare	Net Heating Value (BD)	0.2	5.0
Primary Flare	Camera	0.1	2.3
Secondary Flare	Waste Gas Flow	0.2	3.5
Secondary Flare	Purge Gas Flow	0.1	3.0
Secondary Flare	Steam Flow	0.6	13.3
Secondary Flare	Net Heating Value	0.0	0.0
Secondary Flare	Camera	0.1	2.3
BOP-X Flare	Vent Gas Flow	0.0	0.0
BOP-X Flare	Steam Flow	1.7	36.8
BOP-X Flare	Net Heating Value	0.5	11.5
BOP-X Flare	Camera	0.0	0.0

**TABLE 8.2 2nd Quarter 2021 Instrument Downtime Summary**

<b>Covered Flare</b>	<b>Monitoring System</b>	<b>System Downtime (%)</b>	<b>System Downtime (hours)</b>
Primary Flare	Waste Gas Flow (ZD02)	0.2	3.5
Primary Flare	Waste Gas Flow (BD)	0.2	4.8
Primary Flare	Purge Gas Flow	0.0	0.0
Primary Flare	Supplemental Gas Flow	0.1	1.5
Primary Flare	Steam Flow	0.0	1.0
Primary Flare	Net Heating Value (ZD02)	0.0	0.0
Primary Flare	Net Heating Value (BD)	0.0	0.0
Primary Flare	Camera	0.1	3.2
Secondary Flare	Waste Gas Flow	0.3	6.5
Secondary Flare	Purge Gas Flow	0.0	0.3
Secondary Flare	Steam Flow	0.1	1.3
Secondary Flare	Net Heating Value	0.0	0.0
Secondary Flare	Camera	0.1	3.2
BOP-X Flare	Vent Gas Flow	0.4	8.8
BOP-X Flare	Steam Flow	0.6	12.5
BOP-X Flare	Net Heating Value	0.0	0.0
BOP-X Flare	Camera	0.0	0.3

- (2) If the total number of hours of Instrument Downtime claimed pursuant to Paragraph 45 exceeds 5% of the time in a Calendar Quarter the Covered Flare affected by the downtime is In Operation, an identification of the periods of downtime by date, time, cause (including Malfunction or maintenance), and, if the cause is asserted to be a Malfunction, the corrective action taken;

**Status: No Covered Flare incurred Instrument Downtime claimed pursuant to Paragraph 45 that exceeded 5% of the time the Flare was In Operation in any Calendar Quarter, as noted by “None” in Tables 8.3 – 8.4.**

**TABLE 8.3 1st Quarter 2021 Instrument Downtime Identification (if total hours exceeds 5%)**

Covered Flare	Monitoring System	Start Date/Time	End Date/Time	Cause	Corrective Action
None	None	None	None	None	None

**TABLE 8.4 2nd Quarter 2021 Instrument Downtime Identification (if total hours exceeds 5%)**

Covered Flare	Monitoring System	Start Date/Time	End Date/Time	Cause	Corrective Action
None	None	None	None	None	None

- (3) The total number of hours, expressed as both an absolute number of hours and a percentage of time that the Covered Flare was In Operation, in which the requirements of Paragraphs 43-44 were not applicable because the only gas or gases being vented were Pilot Gas or Purge Gas;

**TABLE 8.5 1st Quarter 2021 Requirements of Paragraphs 43-44 Were Not Applicable Because Only Pilot or Purge Gas Flow**

Covered Flare	Time (%)	Time (Hours)
Primary Flare	61.7	1,331.1
Secondary Flare	87.8	1,896.1
BOP-X Flare	74.4	1,606.1

**TABLE 8.6 2nd Quarter 2021 Requirements of Paragraphs 43-44 Were Not Applicable Because Only Pilot or Purge Gas Flow**

Covered Flare	Time (%)	Time (Hours)
Primary Flare	93.4	2,040.3
Secondary Flare	98.9	2,161.0
BOP-X Flare	94.6	2,066.2

- (4) Exceedances of Combustion Efficiency Standards.

- i. The total number of hours, expressed as both an absolute number of hours and a percentage of time the Covered Flare was In Operation, of

exceedances of the emissions standards in Paragraphs 43-44; provided however, that if the exceedance of these standards was less than 5% of the time in a Calendar Quarter and was due to one or more of the exceptions set forth in Paragraph 45, the report shall so note; and

**Status: No exceedance of combustion efficiency standards was due to one or more of the exceptions set forth in Paragraph 45, as noted by “None” in Tables 8.7 – 8.8.**

**TABLE 8.7 1st Quarter 2021 Exceedance of Paragraph 43-44 Standards**

Covered Flare	Total Exceedance of Emissions Standards		Subset of Exceedances Less Than 5% of the Time in Calendar Quarter and Due to One of the Exceptions Set Forth in Paragraph 45	
	Time (%)	Time (Hours)	Time (%)	Time (Hours)
Primary Flare	0.0	0.0	None	None
Secondary Flare	4.2	90.0	None	None
BOP-X Flare	0.0	0.5	None	None

**TABLE 8.8 2nd Quarter 2021 Exceedance of Paragraph 43-44 Standards**

Covered Flare	Total Exceedance of Emissions Standards		Subset of Exceedances Less Than 5% of the Time in Calendar Quarter and Due to One of the Exceptions Set Forth in Paragraph 45	
	Time (%)	Time (Hours)	Time (%)	Time (Hours)
Primary Flare	0.0	0.0	None	None
Secondary Flare	0.1	2.3	None	None
BOP-X Flare	0.0	0.3	None	None

ii. If the exceedance of the emissions standards in Paragraphs 43-44 was not due to one of the exceptions in Paragraph 45 (Instrument Downtime), or if the exceedance was due to one or more of the exceptions in Paragraph 45 and the total number of hours caused by the exceptions exceeds 5% of the time in a Calendar Quarter that the Covered Flare affected by the Instrument Downtime was In Operation, an identification of each block period that

exceeded the standard, by time and date; the cause of the exceedance (including startup, shutdown, maintenance, or Malfunction), and if the cause is asserted to be a Malfunction, an explanation and any corrective actions taken; and

**Status: Exceedances of combustion efficiency standards, not due to one of the exceptions set forth in Paragraph 45, during 1<sup>st</sup> and 2<sup>nd</sup> Quarters 2021, are listed in in Tables 8.9 – 8.10.**

**TABLE 8.9 1st Quarter 2021 Exceedance of Combustion Efficiency Standards**

<b>Covered Flare</b>	<b>Combustion Efficiency Standard</b>	<b>Start Date/ Time</b>	<b>End Date/ Time</b>	<b>Cause</b>	<b>Corrective Action</b>
BOP-X Flare	NHVcz	1/8/2021 15:45	1/8/2021 15:59	Following failed governor actuator on BOP-X Recycle Ethane Compressor, low NHV Vent Gas was sent to the Flare, resulting in insufficient Vent Gas to steam ratio.	Supplemental Gas to the Flare was increased.
		1/8/2021 21:15	1/8/2021 21:29		
BOP-X Flare	NHVvg	1/8/2021 21:15	1/8/2021 21:29	Following failed governor actuator on BOP-X Recycle Ethane Compressor, low NHV Vent Gas was sent to the Flare.	Supplemental Gas to the Flare was increased.
Secondary Flare	NHVcz	2/20/2021 11:45	3/19/2021 00:29	Due to impacts from severe inclement weather associated with Winter Storm Uri, low NHV Vent Gas was sent to the Flare with insufficient Supplemental Gas addition, resulting in intermittent insufficient NHVcz.	Completed clearing as expeditiously as practicable.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.

Secondary Flare	NHVvg	2/23/2021 16:30	3/18/2021 19:44	Due to impacts from severe inclement weather associated with Winter Storm Uri, low NHV Vent Gas was sent to the Flare with insufficient Supplemental Gas addition, resulting in intermittent insufficient NHVvg.	Completed clearing as expeditiously as practicable.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.
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**TABLE 8.10 2nd Quarter 2021 Exceedance of Combustion Efficiency Standards**

<b>Covered Flare</b>	<b>Combustion Efficiency Standard</b>	<b>Start Date/ Time</b>	<b>End Date/ Time</b>	<b>Cause</b>	<b>Corrective Action</b>
BOP-X Flare	NHVcz	5/20/2021 18:15	5/20/2021 18:29	Following a ground fault and BOP-X Ethylene Refrigeration Compressor shut down, low NHV Vent Gas was sent to the Flare, resulting in insufficient Vent Gas to steam ratio.	Supplemental Gas to the Flare was increased.
Secondary Flare	NHVcz	6/3/2021 13:30	6/3/2021 13:44	Following unplanned turboexpander shut down, low NHV Vent Gas was sent to the Flare.	Restarted turboexpander as expeditiously as practicable.
Secondary Flare	NHVcz	6/24/2021 08:45	6/24/2021 17:44	Following unplanned compressor shut down, low NHV Vent Gas was sent to the Flare, resulting in intermittent insufficient NHVcz.	Restarted compressor as expeditiously as practicable.
Secondary Flare	NHVvg	6/24/2021 08:45	6/24/2021 17:44	Following unplanned compressor shut down, low NHV Vent Gas was sent to the Flare with	Restarted compressor as expeditiously as practicable.



				insufficient Supplemental Gas addition, resulting in intermittent exceedances of the NHV <sub>vg</sub> standard.	
(5)	Compliance with Compressor Availability Requirements. Sufficient information to document compliance with the FGRS Compressor availability requirements of sub-Paragraph 38.b. For any period of non-compliance, the Defendants must identify the date, cause, and corrective action taken.				

#### Requirements Related to Compressors Being Available for Operation

Requirement: CD Paragraph 38.b.i.

i. Baytown Olefins Plant FGRS Operation and Availability.

(1) The Baytown Olefins Plant FGRS must have one Compressor Available for Operation or in operation 98% of the time. The periods provided for in sub-Paragraphs 38.c. and 38.d. below may be included in the amount of time that a Compressor is Available for Operation when determining compliance with the requirement to have a Compressor Available for Operation or in operation.

(2) During turnaround periods that occur approximately every 8-10 years in which fuel gas consumers are shutdown and unable to use Waste Gas recovered by the FGRS, the Baytown Olefins Plant may use, in lieu of the Baytown Olefins Plant FGRS, a thermal oxidizer that achieves at least a 98% CE to combust the amount of Waste Gas that cannot be used by fuel gas consumers during the turnaround period.

**Status: ExxonMobil Baytown Olefins Plant’s Flare Gas Recovery System (FGRS) includes one Compressor, C-03, that supports Covered Flares Primary Flare, Secondary Flare, and BOP-X Flare. Sub-paragraph 38.b.i. requires the ExxonMobil Baytown Olefins Plant FGRS to have one Compressor Available for Operation or in operation 98% of the time. The 8,760-hour rolling sum, rolled hourly, began June 6, 2018 for this existing FGRS. The FGRS Compressor availability calculations, using the methodology provided in CD Paragraph 38.f. “Period to be Used for Computing Percentage of Time”, demonstrated that the FGRS had one Compressor Available for Operation or in operation at least 98% of the time, as shown in Table 8.11.**

**TABLE 8.11 FGRS Operation and Availability**

Covered Flare(s)	FGRS Compressor	Actual Minimum Availability (%) <sup>1</sup>	Required Minimum Availability (%)
Primary Flare, Secondary Flare, and BOP-X Flare	C-03	100	98

<sup>1</sup> The Actual Minimum Availability provided is the minimum percentage of time that the Baytown Olefins Plant had one Compressor Available for Operation or in operation from January 1, 2021 through June 30, 2021, using the 8,760-hour rolling sum, rolled hourly, as prescribed in CD Paragraph 38.f (i.e., the rolling sum included only the previous 8,760 1-hour periods when Potentially Recoverable Gas was generated during all or part of the hour, provided that the Potentially Recoverable Gas was not generated by flows that could not have been prevented through reasonable planning and were in anticipation of or caused by a natural disaster, act of war or terrorism, or External Utility Loss).

#### Requirements Related to Compressors Being Available for Operation

Requirement: CD Paragraph 38c.

c. Maintenance of FGRS. Periods of maintenance on and subsequent restart of the Compressor(s) may be included in the amount of time that a Compressor is Available for Operation when determining compliance with the requirement to have a Compressor Available for Operation or in operation; provided however, these periods must not exceed 1,344 hours per Compressor in a five-year rolling sum period, rolled daily. The Defendants must use best efforts to schedule maintenance activities during a turnaround of the process units venting to the Covered Flare(s) served by the applicable FGRS. To the extent it is not practicable to undertake these maintenance activities during a turnaround of these units, the Defendants must use best efforts to minimize the generation of Waste Gas during such periods.

**Status: Periods of maintenance on and subsequent restart of the Compressor(s) included in the amount of time that a Compressor is Available for Operation is provided in Table 8.12. These periods do not exceed the 1,344 hours per Compressor in a five-year rolling sum period, rolled daily.**

**TABLE 8.12 Periods of Maintenance Included in FGRS Operation and Availability**

Covered Flare(s)	FGRS Compressor	Date	Hours	Five-year Rolling Sum (hours)
Primary Flare, Secondary Flare, and BOP-X Flare	C-03	None	None	0

#### Requirements Related to Compressors Being Available for Operation – FGRS Shut Down

Requirement: CD Paragraph 38d.

d. FGRS Shut Down. Periods in which the FGRS is shut down (including the subsequent restart) due to operating conditions (such as high temperatures or large quantities of entrained liquid in the Vent Gas) outside the design operating range of the FGRS, including the associated knock-out drum(s), such that the outage is necessary for safety or to preserve the mechanical integrity of the FGRS may be included in the amount of time that a Compressor is Available for Operation or in operation. By no later than 45 Days after any such outage, the Defendants must investigate the root cause and all contributing causes of the outage and must implement, as expeditiously as

practicable, corrective action, if any, to prevent a recurrence of the cause(s). In the reports due under Section IX (Reporting Requirements) of this Decree, the Defendants must describe each outage that occurred under the conditions identified in this sub-Paragraph, including the date, duration, cause(s), corrective action, and the status of the implementation of corrective action.

**Status:** There was one period when the FGRS was shut down and restarted due to operating conditions outside the design operating range of the FGRS, which was also included in FGRS availability as allowed under CD Paragraph 38.d, as noted in Table 8.13.

**TABLE 8.13 FGRS Outages Included in FGRS Availability  
January 1, 2021 – June 30, 2021**

Covered Flare(s)	FGRS Compressor	Outage Start Date	Duration (hours)	Cause(s)	Corrective Action(s) and Status
Primary Flare, Secondary Flare, and BOP-X Flare	C-03	2/15/2021	162	Due to impacts from severe inclement weather associated with Winter Storm Uri, FGRS Compressor C-03 was shut down, following site procedures, due to loss of third-party nitrogen supply.	As soon as sufficient on-site and third-party utility supplies, which are required to meet necessary operating conditions and startup the FGRS, were available to BOP, C-03 was promptly restarted and resumed recovering flare gas.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 of this Semi-Annual Report for additional details.

**Status:** As per Consent Decree Paragraph 66h(5), there were no periods of FGRS non-compliance, as noted by “None” in Table. 8.14.

**TABLE 8.14 FGRS Non-Compliance January 1, 2021 – June 30, 2021**

Covered Flare(s)	FGRS Compressor	Start Date	Cause(s)	Corrective Action(s)
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None	None	None	None	None
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## SECTION 9 ADDITIONAL MATTERS

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Consent Decree Paragraph 66i.

- i. Any additional matters that the Defendants believe should be brought to the attention of EPA, or LDEQ for the Baton Rouge Facilities.

**Status: Pursuant to Paragraphs 88-89 of the Consent Decree (CD) between the United States and Exxon Mobil Corporation and ExxonMobil Oil Corporation, No. 17-cv-3302 (S.D. Tex.), entered on June 6, 2018, a letter dated March 1, 2021 (Force Majeure Notice), was submitted to the Environmental Protection Agency providing notice that a Force Majeure event, as defined in CD Paragraph 88, occurred as a result of Winter Storm Uri, and associated utility and third-party supply line instability, interruption, or limited availability. This Force Majeure event impacted the ability of BOP to comply with various provisions of the CD. This section of the Semi-Annual Report provides updates to the Force Majeure Notice and non-compliance issues incurred as a result of Winter Storm Uri under the CD for BOP, as set forth in more detail below.**

**The CD specifies that a Force Majeure request must comply with the requirements of Paragraph 89 of the CD and must provide an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementing any measures to be taken to prevent or mitigate the delay or the effect of the delay; ExxonMobil's rationale for attributing such delay to a Force Majeure if it intends to assert such a claim; and a statement as to whether, in the opinion of ExxonMobil, such event may cause or contribute to an endangerment to public health, welfare or the environment. These elements were described in the Force Majeure Notice submitted to EPA March 1, 2021, and were organized by the respective impacted CD paragraph, along with a discussion of each element. Please note that ExxonMobil reserves all rights and defenses associated with the request.**

### **Impacted CD Requirements**

Impacts noted here may have overlap with state and federal requirements and/or operating permits. Items 1 through 6 below are updates from the initial Force Majeure letter dated March 1, 2021.

**1. Reportable Flaring Incidents [CD Paragraph 34]**

During flaring associated with the BOP shutdown, recovery, and subsequent startup, the RFI threshold was exceeded at the BOP Flare Loop, which includes Primary Flare, Secondary Flare, and BOP-X Flare, from 2/14/2021 – 3/19/2021.

**2. Flare Gas Recovery Availability [CD Paragraph 38]**

Due to the severe inclement weather associated with Winter Storm Uri, FGRS Compressor C-03 was shut down on February 15, 2021, following site procedures, due to loss of third-party nitrogen supply. As soon as third-party natural gas and nitrogen supplies, which are required to meet operating conditions and startup the FGRS, were available and restored to BOP, C-03 was promptly restarted and resumed recovering flare gas. The downtime experienced due to Winter Storm Uri was included in FGRS availability as allowed under CD Paragraph 38.d, as noted in Table 8.13.

**3. Visible Emissions [CD Paragraph 39]**

Following a loss of on-site and third-party utility services, including steam supply, as a result of severe inclement weather associated with Winter Storm Uri, Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours at Primary Flare, Secondary Flare, and BOP-X Flare beginning on 2/15/2021. During shutdown and recovery activities, there were intermittent Visible Emissions of approximately 20 hours at Primary Flare, approximately 27 hours at Secondary Flare, and approximately 40 hours at BOP-X Flare, from 2/15/2021 – 2/20/2021. During startup activities following Winter Storm Uri, there were approximately 0.2 hours of intermittent Visible Emissions at BOP-X Flare on 3/2/2021. Refer to Attachment D of this Semi-Annual report for additional details.

**4. Flare Tip Velocity [CD Paragraph 40]**

Due to severe inclement weather and shutdown associated with Winter Storm Uri, the Flare Tip Velocity at Secondary Flare exceeded 60 feet per second for 1.3 hours on 2/16/2021. During flaring associated with the subsequent startup, the Flare Tip Velocity at Secondary Flare exceeded 60 feet per second for 15.3 hours intermittently from 3/11/2021 – 3/14/2021. Refer to Attachment D of this Semi-Annual report for additional details.

**5. Net Heating Value Standards [CD Paragraph 43]**

Due to reduced natural gas availability in response to the Railroad Commission of Texas Emergency Order establishing natural gas delivery priorities, the NHVvg value at Secondary Flare fell below 300 BTU/scf and the NHVcz value fell below 270 BTU/scf for 40.5 hours intermittently during shutdown and recovery activities from 2/15/2021 – 2/27/2021. Secondary Flare NHVvg and NHVcz values fell below 300 and 270 BTU/scf, respectively, for 49.5 hours intermittently during the subsequent

startup from 3/5/2021 – 3/18/2021. Refer to Attachment D of this Semi-Annual report for additional details.

**6. Instrument Downtime [CD Paragraph 45]**

As a result of Winter Storm Uri, BOP experienced instrument downtime, including steam flow monitoring system downtime that resulted in loss of NHVcz readings. Steam flow instrumentation was restored and downtime remained below 5% for the quarter.

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## SECTION 10 FENCELINE AIR MONITORING REPORTS

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Consent Decree Paragraph 67 a. – b.

The Defendants must submit Fenceline Air Monitoring Reports as part of each Semi-Annual Report. The Fenceline Air Monitoring Reports must contain the following information:

- a. In spreadsheet format, the individual sample results for each monitor comprising each Fenceline Monitoring System, each bi-weekly annual average benzene concentration difference value (once annual averages are available), and the corresponding meteorological data for the relevant monitoring periods. The first two columns of each spreadsheet shall be the date and time for each sample taken; and
- b. A detailed description of the actions and findings of any root cause analysis and corrective action(s) undertaken pursuant to Paragraph 3(g) of Appendix 2.2, including the known results of the corrective action(s) and the anticipated emissions reductions (in TPY per pollutant).

**Status: ExxonMobil Baytown Olefins Plant began collecting fenceline monitoring May 27, 2019 (retrieval June 10, 2019). The individual sample results for the samples that were collected between January 1, 2021 – June 30, 2021 and the corresponding meteorological data for the relevant monitoring periods are provided in Attachment A. The bi-weekly annual average benzene concentration difference value began once there were twenty six 14-Day sampling periods (retrieval of 26<sup>th</sup> sample on May 26, 2020).**

**ExxonMobil Baytown Olefins Plant has remained below the action level of 9 µg/m<sup>3</sup> and thus, no root cause analyses or corrective actions pursuant to Paragraph 3(g) of Appendix 2.2 were undertaken during this reporting period.**



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## SECTION 11 ANNUAL EMISSION DATA

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### Consent Decree Paragraph 68

In the Semi Annual Report that is submitted on February 28 of each year, the Defendants must provide, for each Covered Flare, for the prior calendar year, the amount of emissions of the following compounds (in tons per year): VOCs, HAPs, NO<sub>x</sub>, CO<sub>2</sub>, methane, and ethane.

**Status: The amount of emissions for VOCs, HAPs, NO<sub>x</sub>, CO<sub>2</sub>, methane, and ethane, for the prior calendar year, will be included in the Semi-Annual Report submitted by February 28 each year.**

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## SECTION 12 ANY ADDITIONAL NON-COMPLIANCE

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### Consent Decree Paragraph 69

Each Semi-Annual Report must also include a description of any non-compliance with the requirements of this Consent Decree not otherwise identified by Paragraph 66 along with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, the Defendants must so state in the report. In such a case, the Defendants must investigate the cause of the violation and then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day the Defendants become aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves the Defendants of their obligation to provide the notice required by Section XI (Force Majeure).

**TABLE 12.1 Additional Non-Compliance**

<b>Covered Flare</b>	<b>Start Date/ Time</b>	<b>End Date/ Time</b>	<b>Cause</b>	<b>Corrective Action</b>
Primary Flare	2/15/2021 08:44	2/18/2021 08:17	Due to a loss of on-site and third-party utility services, including steam supply, as a result of severe inclement weather associated with Winter Storm Uri, intermittent Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours.	Steam supply was restored and available.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.
Secondary Flare	2/15/2021 08:09	2/17/2021 18:15	Due to a loss of on-site and third-party utility services, including steam supply, as a result of severe inclement weather associated with Winter Storm Uri, intermittent Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours.	Steam supply was restored and available.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.

BOP-X Flare	2/15/2021 09:02	2/20/2021 12:53	Due to a loss of on-site and third-party utility services, including steam supply, as a result of severe inclement weather associated with Winter Storm Uri, intermittent Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours.	Steam supply was restored and available.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.
Secondary Flare	2/16/2021 13:02	3/14/2021 11:29	Due to severe inclement weather associated with Winter Storm Uri, Waste Gas was sent to the Flare with intermittent exceedances of the maximum allowed Flare Tip Velocity.	Waste Gas flow was reduced.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.
BOP-X Flare	3/2/2021 17:07	3/2/2021 17:14	During startup activities following Winter Storm Uri, Visible Emissions exceeding a total of 5 minutes during any 2 consecutive hours.	Steam flow was increased.  Force Majeure event as set forth in a letter to the EPA dated 3/1/21. Refer to Section 9 and Attachment D of this Semi-Annual Report for additional details.
BOP-X Flare	5/20/2021 06:54	5/20/2021 17:56	Following a ground fault and BOP-X Ethylene Refrigeration Compressor shut down, Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours.	Steam flow was increased.
BOP-X Flare	6/25/2021 17:22	6/25/2021 19:46	Following unplanned shut down of BOP-X Ethylene Refrigeration Compressor, Visible Emissions exceeded a total of 5 minutes during any 2 consecutive hours.	Steam flow was increased.

			Sampler Name	BOP-1	BOP-2	BOP-3	BOP-4	BOP-5	BOP-6	BOP-7	BOP-8	BOP-9	BOP-10	BOP-11	BOP-12	BOP-13	BOP-14	BOP-15	
			Sampler Latitude	29.76283	29.75991	29.75701	29.75590	29.75313	29.75195	29.75023	29.75254	29.75486	29.75557	29.75798	29.75968	29.76146	29.76266	29.76258	
			Sampler Longitude	-95.01518	-95.01736	-95.01798	-95.01812	-95.01505	-95.01292	-95.01098	-95.00864	-95.00708	-95.00531	-95.00287	-95.00374	-95.00568	-95.00840	-95.01228	
Date of Retrieval	Time of Retrieval	Temperature (°C)	Barometric Pressure (hPA)	Benzene Sample Results (ug/m3)															Bi-weekly Annual Average Δc (ug/m3)
1/4/2021	10:21	13.4	1016.2	1.4	1.5	1.5	1.4	1.8	1.6	1.4	2.0	1.2	1.4	1.0	1.0	1.0	1.0	1.2	2.1
1/18/2021	10:03	9.5	1021.5	1.4	1.4	1.7	1.7	2.0	2.3	2.9	2.1	1.8	1.9	1.8	1.9	2.0	1.7	1.9	2.1
2/1/2021	12:48	16.1	1018.1	1.6	1.5	2.0	2.0	2.1	2.2	1.6	1.3	1.2	1.5	0.9	1.0	1.1	1.1	1.3	2.0
2/14/2021	11:18	11.2	1017.2	1.3	1.9	2.7	2.0	2.2	2.4	1.6	1.3	1.1	1.1	0.9	0.9	1.0	0.9	1.0	2.0
3/1/2021	11:28	10.9	1020.1	3.0	5.1	6.4	4.7	9.2	5.4	2.6	2.9	9.9	4.2	1.3	1.2	3.1	2.8	2.2	2.3
3/15/2021	10:52	17.0	1021.4	2.0	2.7	5.1	3.9	4.6	4.2	2.7	2.8	6.6	3.8	0.9	0.9	0.9	1.4	2.9	2.5
3/29/2021	10:46	18.4	1014.9	1.4	1.7	2.4	2.2	3.6	4.5	2.9	2.1	2.0	2.9	1.1	1.1	1.1	1.4	1.4	2.6
4/12/2021	11:31	17.5	1023.3	1.6	2.8	3.8	3.2	5.7	3.7	1.4	1.1	1.2	1.1	0.7	0.9	1.0	1.1	1.2	2.6
4/26/2021	11:15	19.6	1014.7	0.9	1.4	3.9	2.6	2.4	3.6	2.4	1.4	2.0	1.1	0.9	0.9	0.9	0.8	0.8	2.7
5/10/2021	11:12	24.6	1012.7	1.9	3.3	4.0	4.0	9.5	3.5	1.1	1.0	1.2	1.1	0.9	1.1	0.9	0.8	1.3	2.9
5/24/2021	11:07	23.1	1016.5	1.2	2.9	16.0	5.1	4.7	4.6	2.6	1.4	2.2	1.5	0.7	0.8	0.7	0.8	1.0	3.5
6/7/2021	11:19	25.5	1015.4	1.7	2.9	4.5	3.3	6.2	3.8	1.8	1.6	1.5	1.4	0.8	1.0	0.9	1.0	1.6	3.6
6/21/2021	13:11	29.8	1013.3	2.2	2.6	3.1	2.8	7.2	6.4	2.6	1.7	1.8	1.7	1.2	1.5	1.3	1.5	2.2	3.7

**Attachment B – Subsequently Updated WGMP Tables**  
**(Confidential Business Information - Redacted)**

**Attachment C – Subsequently Updated WGMP Flare Mapping Schematics  
(Confidential Business Information - Redacted)**

**Attachment D**  
**Summary of ExxonMobil Baytown Olefins Plant Information Related to Winter Storm Uri Force**  
**Majeure Notification**

**Exceedance of Combustion Efficiency Standards**

<b>Covered Flare</b>	<b>Combustion Efficiency Standard</b>	<b>Start Date/ Time</b>	<b>End Date/ Time</b>
Secondary Flare	NHVcz	2/20/2021 11:45	2/20/2021 13:59
Secondary Flare	NHVcz	2/20/2021 15:30	2/20/2021 15:59
Secondary Flare	NHVcz	2/20/2021 17:00	2/20/2021 17:45
Secondary Flare	NHVcz	2/20/2021 19:45	2/20/2021 19:59
Secondary Flare	NHVcz	2/21/2021 3:45	2/21/2021 4:29
Secondary Flare	NHVcz	2/21/2021 4:45	2/21/2021 6:14
Secondary Flare	NHVcz	2/21/2021 7:30	2/21/2021 8:29
Secondary Flare	NHVcz	2/21/2021 14:15	2/21/2021 14:29
Secondary Flare	NHVcz	2/21/2021 15:00	2/21/2021 15:59
Secondary Flare	NHVcz	2/21/2021 16:15	2/21/2021 16:29
Secondary Flare	NHVcz	2/21/2021 23:00	2/21/2021 23:29
Secondary Flare	NHVcz	2/22/2021 0:00	2/22/2021 0:44
Secondary Flare	NHVcz	2/22/2021 10:45	2/22/2021 10:59
Secondary Flare	NHVcz	2/22/2021 11:15	2/22/2021 11:59
Secondary Flare	NHVcz	2/22/2021 16:00	2/22/2021 16:44
Secondary Flare	NHVcz	2/22/2021 17:00	2/22/2021 20:14
Secondary Flare	NHVcz	2/23/2021 0:00	2/23/2021 0:14
Secondary Flare	NHVcz	2/23/2021 15:45	2/23/2021 16:44
Secondary Flare	NHVcz	2/23/2021 21:30	2/23/2021 21:59
Secondary Flare	NHVcz	2/23/2021 22:45	2/23/2021 23:59
Secondary Flare	NHVcz	2/24/2021 1:45	2/24/2021 3:44
Secondary Flare	NHVcz	2/24/2021 7:15	2/24/2021 7:59
Secondary Flare	NHVcz	2/24/2021 8:15	2/24/2021 8:29
Secondary Flare	NHVcz	2/24/2021 21:45	2/24/2021 22:59
Secondary Flare	NHVcz	2/24/2021 23:15	2/24/2021 2:44
Secondary Flare	NHVcz	2/25/2021 3:00	2/25/2021 3:59
Secondary Flare	NHVcz	2/25/2021 4:15	2/25/2021 7:14
Secondary Flare	NHVcz	2/25/2021 14:30	2/25/2021 15:29
Secondary Flare	NHVcz	2/25/2021 23:30	2/26/2021 0:59
Secondary Flare	NHVcz	2/26/2021 4:00	2/26/2021 4:29
Secondary Flare	NHVcz	2/26/2021 7:00	2/26/2021 7:29
Secondary Flare	NHVcz	2/26/2021 11:15	2/26/2021 11:59
Secondary Flare	NHVcz	2/26/2021 12:15	2/26/2021 14:59
Secondary Flare	NHVcz	2/26/2021 16:45	2/26/2021 17:59
Secondary Flare	NHVcz	2/26/2021 19:00	2/26/2021 20:44
Secondary Flare	NHVcz	2/27/2021 0:00	2/27/2021 0:59
Secondary Flare	NHVcz	3/5/2021 3:30	3/5/2021 4:14
Secondary Flare	NHVcz	3/10/2021 23:15	3/11/2021 0:59
Secondary Flare	NHVcz	3/11/2021 2:00	3/11/2021 4:44
Secondary Flare	NHVcz	3/11/2021 13:30	3/11/2021 14:14

**Attachment D**  
**Summary of ExxonMobil Baytown Olefins Plant Information Released to Winter Storm Uri Force**  
**Majeure Notification**

Secondary Flare	NHVcz	3/11/2021 15:15	3/11/2021 17:59
Secondary Flare	NHVcz	3/11/2021 20:30	3/12/2021 3:29
Secondary Flare	NHVcz	3/12/2021 10:30	3/12/2021 12:29
Secondary Flare	NHVcz	3/13/2021 4:15	3/13/2021 5:59
Secondary Flare	NHVcz	3/14/2021 7:45	3/14/2021 8:44
Secondary Flare	NHVcz	3/15/2021 10:15	3/15/2021 10:29
Secondary Flare	NHVcz	3/15/2021 21:15	3/15/2021 21:44
Secondary Flare	NHVcz	3/16/2021 1:00	3/16/2021 1:45
Secondary Flare	NHVcz	3/16/2021 3:30	3/16/2021 5:14
Secondary Flare	NHVcz	3/16/2021 5:45	3/16/2021 7:29
Secondary Flare	NHVcz	3/16/2021 8:30	3/16/2021 8:59
Secondary Flare	NHVcz	3/16/2021 13:30	3/16/2021 14:44
Secondary Flare	NHVcz	3/16/2021 15:00	3/16/2021 15:14
Secondary Flare	NHVcz	3/16/2021 15:30	3/16/2021 15:44
Secondary Flare	NHVcz	3/16/2021 22:00	3/16/2021 22:14
Secondary Flare	NHVcz	3/17/2021 1:30	3/17/2021 3:44
Secondary Flare	NHVcz	3/17/2021 4:00	3/17/2021 4:29
Secondary Flare	NHVcz	3/17/2021 4:45	3/17/2021 5:29
Secondary Flare	NHVcz	3/17/2021 5:45	3/17/2021 6:14
Secondary Flare	NHVcz	3/17/2021 6:45	3/17/2021 8:29
Secondary Flare	NHVcz	3/17/2021 13:00	3/17/2021 13:14
Secondary Flare	NHVcz	3/18/2021 2:30	3/18/2021 2:44
Secondary Flare	NHVcz	3/18/2021 3:30	3/18/2021 6:29
Secondary Flare	NHVcz	3/18/2021 7:00	3/18/2021 10:59
Secondary Flare	NHVcz	3/18/2021 12:00	3/18/2021 12:29
Secondary Flare	NHVcz	3/18/2021 15:00	3/18/2021 15:44
Secondary Flare	NHVcz	3/18/2021 18:45	3/19/2021 0:29
Secondary Flare	NHVvg	2/23/2021 16:30	2/23/2021 16:44
Secondary Flare	NHVvg	2/23/2021 21:30	2/23/2021 21:44
Secondary Flare	NHVvg	2/23/2021 23:15	2/23/2021 23:59
Secondary Flare	NHVvg	2/24/2021 1:45	2/24/2021 2:29
Secondary Flare	NHVvg	2/26/2021 4:00	2/26/2021 4:14
Secondary Flare	NHVvg	2/26/2021 7:00	2/26/2021 7:29
Secondary Flare	NHVvg	2/26/2021 11:15	2/26/2021 11:59
Secondary Flare	NHVvg	2/26/2021 12:30	2/26/2021 12:59
Secondary Flare	NHVvg	2/26/2021 13:15	2/26/2021 13:44
Secondary Flare	NHVvg	2/26/2021 16:45	2/26/2021 17:29
Secondary Flare	NHVvg	2/26/2021 19:00	2/26/2021 20:14
Secondary Flare	NHVvg	2/27/2021 0:00	2/27/2021 0:29
Secondary Flare	NHVvg	2/27/2021 0:45	2/27/2021 0:59
Secondary Flare	NHVvg	3/10/2021 23:15	3/11/2021 0:29
Secondary Flare	NHVvg	3/11/2021 2:15	3/11/2021 4:44
Secondary Flare	NHVvg	3/11/2021 13:30	3/11/2021 14:14
Secondary Flare	NHVvg	3/11/2021 15:15	3/11/2021 17:59



**Attachment D**  
**Summary of ExxonMobil Baytown Olefins Plant Information Related to Winter Storm Uri Force**  
**Majeure Notification**

Secondary Flare	NHVvg	3/11/2021 20:30	3/12/2021 3:29
Secondary Flare	NHVvg	1/0/1900 10:45	3/12/2021 12:29
Secondary Flare	NHVvg	3/13/2021 4:15	3/13/2021 5:59
Secondary Flare	NHVvg	3/14/2021 7:45	3/14/2021 8:44
Secondary Flare	NHVvg	3/15/2021 10:15	3/15/2021 10:29
Secondary Flare	NHVvg	3/15/2021 21:15	3/15/2021 21:44
Secondary Flare	NHVvg	3/17/2021 7:30	3/17/2021 8:29
Secondary Flare	NHVvg	3/18/2021 10:15	3/18/2021 10:59
Secondary Flare	NHVvg	3/18/2021 12:00	3/18/2021 12:29
Secondary Flare	NHVvg	3/18/2021 15:00	3/18/2021 15:44
Secondary Flare	NHVvg	3/18/2021 18:45	3/18/2021 19:44

**Additional Non-Compliance**

<b>Covered Flare</b>	<b>Parameter</b>	<b>Start Date/ Time</b>	<b>End Date/ Time</b>
Secondary Flare	Flare Tip Velocity	2/16/2021 13:02	2/16/2021 13:16
Secondary Flare	Flare Tip Velocity	3/11/2021 16:00	3/11/2021 16:14
Secondary Flare	Flare Tip Velocity	3/11/2021 20:00	3/11/2021 20:59
Secondary Flare	Flare Tip Velocity	3/11/2021 21:15	3/11/2021 21:29
Secondary Flare	Flare Tip Velocity	3/11/2021 21:45	3/11/2021 23:59
Secondary Flare	Flare Tip Velocity	3/12/2021 2:45	3/12/2021 4:29
Secondary Flare	Flare Tip Velocity	3/13/2021 4:45	3/13/2021 9:44
Secondary Flare	Flare Tip Velocity	3/13/2021 10:00	3/13/2021 10:14
Secondary Flare	Flare Tip Velocity	3/13/2021 11:30	3/13/2021 12:29
Secondary Flare	Flare Tip Velocity	3/13/2021 12:45	3/13/2021 13:14
Secondary Flare	Flare Tip Velocity	3/13/2021 14:30	3/13/2021 14:59
Secondary Flare	Flare Tip Velocity	3/13/2021 16:00	3/13/2021 16:44
Secondary Flare	Flare Tip Velocity	3/13/2021 17:00	3/13/2021 17:14
Secondary Flare	Flare Tip Velocity	3/13/2021 17:45	3/13/2021 18:44
Secondary Flare	Flare Tip Velocity	3/14/2021 11:00	3/14/2021 11:29
Primary Flare	Visible Emissions	2/15/2021 8:44:45	2/15/2021 18:42:11
Primary Flare	Visible Emissions	2/16/2021 7:07:51	2/16/2021 8:48:47
Primary Flare	Visible Emissions	2/16/2021 8:52:00	2/16/2021 9:04:51
Primary Flare	Visible Emissions	2/16/2021 9:10:16	2/16/2021 9:11:27
Primary Flare	Visible Emissions	2/16/2021 9:37:28	2/16/2021 9:39:10
Primary Flare	Visible Emissions	2/16/2021 9:50:09	2/16/2021 9:51:41
Primary Flare	Visible Emissions	2/16/2021 10:24:08	2/16/2021 17:59:26
Primary Flare	Visible Emissions	2/18/2021 7:40:50	2/18/2021 8:17:00
Secondary Flare	Visible Emissions	2/15/2021 8:09:01	2/15/2021 18:42:11
Secondary Flare	Visible Emissions	2/16/2021 7:00:01	2/16/2021 18:05:35
Secondary Flare	Visible Emissions	2/17/2021 12:36:12	2/17/2021 18:15:52
BOP-X Flare	Visible Emissions	2/15/2021 8:57:23	2/15/2021 10:44:48
BOP-X Flare	Visible Emissions	2/15/2021 17:46:31	2/15/2021 17:51:31
BOP-X Flare	Visible Emissions	2/15/2021 17:51:31	2/15/2021 18:43:26

**Attachment D**  
**Summary of ExxonMobil Baytown Olefins Plant Information Related to Winter Storm Uri Force**  
**Majeure Notification**

BOP-X Flare	Visible Emissions	2/16/2021 6:49:22	2/16/2021 6:54:22
BOP-X Flare	Visible Emissions	2/16/2021 6:54:22	2/16/2021 11:47:28
BOP-X Flare	Visible Emissions	2/16/2021 12:34:45	2/16/2021 14:01:14
BOP-X Flare	Visible Emissions	2/16/2021 14:16:36	2/16/2021 14:17:47
BOP-X Flare	Visible Emissions	2/16/2021 14:38:13	2/16/2021 18:36:41
BOP-X Flare	Visible Emissions	2/17/2021 7:36:36	2/17/2021 7:41:36
BOP-X Flare	Visible Emissions	2/17/2021 7:41:36	2/17/2021 18:27:51
BOP-X Flare	Visible Emissions	2/18/2021 10:35:01	2/18/2021 10:40:01
BOP-X Flare	Visible Emissions	2/18/2021 10:40:01	2/18/2021 18:42:56
BOP-X Flare	Visible Emissions	2/19/2021 7:11:33	2/19/2021 7:16:33
BOP-X Flare	Visible Emissions	2/19/2021 7:16:33	2/19/2021 10:37:46
BOP-X Flare	Visible Emissions	2/19/2021 17:09:25	2/19/2021 17:14:25
BOP-X Flare	Visible Emissions	2/19/2021 17:14:25	2/19/2021 18:38:15
BOP-X Flare	Visible Emissions	2/20/2021 10:21:29	2/20/2021 10:26:29
BOP-X Flare	Visible Emissions	2/20/2021 10:26:29	2/20/2021 12:53:29
BOP-X Flare	Visible Emissions	3/2/2021 17:02:57	3/2/2021 17:11:44
BOP-X Flare	Visible Emissions	3/2/2021 17:13:16	3/2/2021 17:14:47